

## ABSTRACT

### COMPARISON OF RECOVERY RATE, MOTILITY RATE AND VIABILITY IN SUBGROUPS OF CRYOPRESERVED SPERMATOZOA FROM OLIGOZOOSPERMIC PATIENTS

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**Objective:** The aim of this study was to analyze the recovery rate, motility rate and viability in subgroups of cryopreserved spermatozoa from oligozoospermic patient. This study also aimed to analyze these minimum amount spermatozoa to be cryopreserved but still had a good quality to be used.

**Method:** This study was conducted at Medical Biology Laboratory Faculty of Medicine Airlangga University. Sample of the study was ejaculate obtained from patients attending Ferina Women's and Children's Hospital. Six patients were included in this study. All samples were examined for motility and concentration of spermatozoa with 5<sup>th</sup> edition WHO's method. We divided the subgroups into 4 group: group of 71-100 sperm, group of 31-70 sperm, group 11-30 sperm and group 1-10 sperm. Moving spermatozoa were aspirated into pipette in certain amount and put into 2 µl microdrops of freezing medium. The drops were put in the tip of Cryologic® and left in liquid nitrogen vapour for 1 min prior to be plunged in it. For thawing, Cryologic® was warmed in 26°C and the recovered sperm were being observed in inverted microscope to assess recovery, motility and viability.

**Result:** This study showed that there was a significant differences of recovery rate between subgroups of cryopreserved sperm ( $p < 0,001$ , CI 95%). The highest result obtained from group 1-10 sperm. This study also showed a significant difference of viability ( $p = 0,011$ , CI 95%). The highest viability obtained from group 71-100. There was no differences between subgroups in motility rate ( $p = 0,070$ , CI 95%)

**Conclusion :** Except viability this study did not show the more sperm cryopreserved the more recovery rate and motility rate but sperm in any amount even single could be cryopreserved with good result.

**Key words :** cryopreservation, low amount count, recovery, motility, viability